Lamond Recreation Center

Programming Document

District of Columbia
Department of Parks and Recreation
3149 16th Street, NW
Washington, DC 20010

Program Managers:
The Jair Lynch Companies/Alpha Corporation, JV
1508 U Street, NW
Washington, DC 20009

McDONALD·WILLIAMS·BANKS·ARCHITECTS
Architecture and Planners
7705 Georgia Avenue, NW Washington, D.C. 20012

In conjunction with
Gauthier, Alvarado & Associates
Architecture and Planners
105 West Broad Street
Falls Church, VA 22046

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Introduction

The following room summary scope presents information regarding the design parameters used by McDonald•Williams•Banks•Architects in preparing the concept design for the Lamond Recreation Center.

The site is located in a residential area on Kansas and Tuckerman Streets, NW, Washington, DC. The plan was developed to minimize the impact of the steeply sloped site on the building design by providing two primary levels within the building.

The priorities established for developing the concept design were the following

- Building Design
- Basketball Court
- Tot Lot
- Tennis Court
- Outdoor Pavilion Space

The Building Design was to include the following major spaces:

- Multipurpose Recreational Space
- Meeting Rooms
- Computer Lab
- Locker Rooms & Showers
- Pantry/Kitchen
- Arts and Crafts
- Gymnasium *(added Sept. 2003)*

I. ARCHITECTURAL SYSTEMS

A. Building: The building's largest volume, and the predominant element will be the gymnasium. It will be framed with steel trusses supported by columns, acoustic deck, and painted metal roof. The other parts of the building will be load-bearing masonry with a framed sloped roof. The exterior walls are brick and insulated glass.

B.

The circulation through the building is clear and direct. A control desk is located at the cross axis. The kitchen is located on this public corridor for easy access to meeting rooms. The building will have a weight training room.

Vinyl composition tile is proposed for the public areas, with a wood gym floor. Ceramic tile is proposed for the toilet/locker rooms. Retractable bleachers are proposed along one wall. Windows to the public spaces and to the exterior are numerous. A built in bench for groups is provided in the main lobby. Ceilings will be a mix of acoustic suspended ceiling, exposed structure, and gypsum board ceilings.

Preliminary Building Program:

Gymnasium, with bleachers	7,469
Storage	160
Small Kitchenette/Storage	225
Office/First Aid	300
Control Room	200
Multi-purpose/Meeting	600
Arts & Crafts	300
Locker Room/Toilets	800
Meeting Room	300
Weight Training Room	300
Computer Lab	300
TOTAL Assignable Area	**10,954**

10,954 Assignable square feet x 1.3 grossing factor = **14,240** Gross Square Feet.

II. STRUCTURAL

A. Foundations: The foundation system will be spread concrete column footings with continuous concrete wall footings at perimeter walls and interior load-bearing masonry walls. Final determination of the foundation system will be made after completion of a subsurface soils investigation.

B. Slab-on-grade: The floor slab-on-grade in the will be a five inch thick concrete slab reinforced with welded wire fabric and poured over a vapor barrier and six inch of gravel fill.

C Roof Framing: The roof system in the gymnasium area will consist of steel trusses with composite acoustical roof decking. The roof framing in the remainder of the building will consist of load-bearing masonry walls and steel beams and columns supporting open web steel joist and 1-1/2 inch deep galvanized metal deck

D. Lateral Bracing: Lateral forces will be resisted by masonry bearing walls.

III. PLUMBING AND FIRE PROTECTION SYSTEMS

A. Water Service: Water for domestic use and the sprinkler system will be provided to the site from the DC Water and Sewer Authority.

B. Gas: If available, natural gas will be provided to the site for all gas fired heating equipment.

C. Domestic Water Systems: Domestic cold/hot water systems will service each space and fixture as required.

D. Hot Water: Hot water will be provided by a gas fired water heater capable of delivering 140 deg. F hot water and water tempering valves will be used to reduce the temperature to 110 deg. F at the fixtures.

E. Waste, Vent and Storm Water Systems: A sanitary waste and vent system will be provided from all fixtures and will flow by gravity to the city sewer. Roof drains will convey water from roofs and will be piped to the site drainage system.

G. Fixtures: The quantity and type of plumbing fixtures will be in accordance with the District of Columbia Construction Codes-1999 Supplement and 1996 International Plumbing Code.

H. Floor Drains: Floor drains will be provided in all toilet, shower and locker rooms.

I. The building will be fully sprinklered with a wet pipe sprinkler system. The system will be hydraulically designed in accordance with the National Fire Protection Association Standard 13. Fire flow tests will be conducted to determine whether a fire pump will be required.

IV. HVAC SYSTEMS DESCRIPTIONS

A. General: The HVAC systems design will comply with criteria established in the District of Columbia Construction Codes-1999 Supplement, ASHRAE Standards, and all other applicable standards and codes.

B. Outdoor Design Conditions (Source: ASHRAE Fundamentals Handbook 2001 Washington Regional Area):

Summer Design Dry Bulb - 89 deg. F (2%)
Summer Design Wet Bulb - 74 deg. F (2%)
Winter Design - 15 deg. F (99.6%)

C. Indoor Design Conditions:

Occupancy	Cooling	Heating
Offices, Computer Lab, Lobby and Seating	78 deg. F(db)	70 deg. F(db)
Gymnasium, Game Room Multipurpose Room, Exercise & Weight Room	78 deg. F(db)	70 deg. F(db)
Lockers/Showers	80 deg. F(db)	70 deg. F(db)
Storage	80 deg. F(db)	65 deg. F(db)

D. Ventilation Requirements (International Mechanical Code):

Occupancy	Minimum Outside Air	Remarks
Offices, Computer Lab	20 CFM/Occupant	Occupancy = 7 people per 1,000 Sq. Ft.
Lobby Seating	20 CFM/Occupant	Occupancy = 60 people per 1,000 Sq. Ft.
Gym, Multi-Purpose Weight Room	20 CFM/Occupant	Occupancy = 30 people per 1,000 Sq. Ft.
Locker Rooms	0.2 CFM/Ft5	100% Exhausted
Restrooms	75 CFM/Toilet	100% Exhausted
Other Spaces	20 CFM/Occupant	

E. Fuel Selections:

1. Heating: If available, natural gas will be used for heating at this site. If gas is not available electric heat pumps will be used. 2. Cooling: Electric cooling will be provided to spaces using high efficiency roof top units.

F. Heating:

1. All Areas: Heating will be provided from gas fired heating furnaces located in the roof top units. Refer to Cooling section for system zoning.

G. Cooling:

1. All Areas: Air conditioning will be provided by high efficiency electric roof top units (RTUs). The spaces will be divided into approximately 8 zones as follows: 2 RTUs for the Gymnasium, 1 RTU for the Multi-Purpose/Meeting Room, 1 RTU for the Lobby and Seating Areas, 1 RTU for the Exercise/Weight Room, 1 RTU for the Computer Lab, 1 RTU for the Office/First Aid, and 1 RTU for the Locker/Restroom Areas.

H. Air Distribution/Ventilation:

1. Outside air for ventilation will be introduced through the air conditioning system roof top units. Supply air will be distributed throughout via low pressure ductwork.

V. ELECTRICAL SYSTEMS

A. Power:

The proposed incoming service to the building will be 800 Amperes (or as required) at a distribution voltage of 480/277 Volt, three-phase, four-wire. Power will be supplied underground from a pad mounted utility transformer located behind the Electrical Room.

Electrical service conductors will be brought underground to the main electrical distribution panel located in the Electrical Room. The main distribution panel will be an 800-Ampere main circuit breaker type with bolt-on branch circuit breakers.

A ground system consisting of the building structure, water service pipe, and copper clad steel ground rods will be implemented. Grounding of all telecommunications and IT equipment will be derived from the same grounding system as the electric service ground.

Power throughout the building will be distributed as follows. Lighting loads will be fed from a dedicated 480/277 Volt, three-phase, four-wire panelboard located in the electrical room. Mechanical equipment loads will also be fed from a 480/277 Volt three-phase, four-wire panelboard dedicated to mechanical equipment. General-purpose receptacles, miscellaneous

appliances, etc. will be fed from 208/120 Volt, three-phase, four-wire panelboards via dry-type step down transformers.

Sensitive electronic equipment such as computers, printers, and other information technology type equipment will be fed from 208/120 Volt dedicated panelboards. These panelboards will have isolated ground buses, 200% rated neutral buses, and integral transient voltage surge suppression equipment. Dry-type step-down transformers for computer panelboards will be

K-rated to compensate for the effects of harmonics. A separate panelboard for the computer lab shall be located in the computer lab.

Copper conductors with 600 Volt ac thermoplastic insulation type THHN/THWN will be used for all feeder and branch circuit wiring. EMT type conduit with compression type fittings will be used for all exposed and concealed indoor branch circuit wiring applications except for wet locations and vibrating equipment. Rigid galvanized steel conduit will be used for in-slab conduit runs. PVC conduit will be used for all underground applications. Individual neutral conductors will be provided for each branch circuit. Shared neutrals will be used only for motor and heater type equipment.

A 50 kW diesel generator with a sub-base fuel tank will provide emergency power for all life safety and critical loads. The generator will be pad mounted outdoors behind the electrical room next to the pad-mounted transformer. A 480/277 Volt and 208/120 Volt emergency panelboards will be provided in the electrical room.

B. Lighting:

Interior light fixtures in offices and classrooms will consist of fluorescent lay-in types. Each fluorescent fixture will have 277-volt electronic ballasts and F32T8 lamps. Compact fluorescent down-lights and surface mounted fixtures will be used where appropriate. Exterior lighting consists of wall mounted accent fixtures and pole-mounted luminaires in the parking areas. Lamps for exterior lighting will be 100 watts metal halide type.

Control of site lighting will be photocell on/timer off. Motion sensors will be utilized in some public spaces for energy conservation.

Emergency lighting will consist of LED type exit lights with battery back up and emergency lights with battery packs. Night-lights will be provided in common areas that will normally remain on. Night-lights will be equipped with emergency ballasts for one lamp.

C. Receptacles:

Computer and TV video use receptacles will be the orange colored isolated ground type. All other receptacles will be general purpose or special purpose as needed. GFI (Ground Fault Interrupter) type receptacles will be used in bathrooms, locker rooms and kitchen countertops.

D. Communications/Data Wiring:

Telephone service will be provided to the building via (2) 4" PVC conduits. A dedicated plywood backing board for punch down blocks and telephone equipment will be provided.

Category 5E UTP cable will be the medium for the telephone system and RJ-45 jacks will be the connector type. The network system will also utilize category 5E cable for network drops and RJ-45 jacks. Hubs and network patch panels will be located in the electrical room. Other communication systems such as CATV and public address will be provided.

Raceways for data and voice systems will utilize conduit, in floor duct, and cable tray. Pull boxes, outlet boxes, and wire ways will be provided as needed.

E. Fire Alarm System:

An addressable fire alarm system will be provided with smoke detectors, duct detectors, heat detectors, pull stations, audible/visual alarm indication devices, flow switch, valve tamper and dialer. A graphic fire alarm annunciator panel will be provided at the main entrance. The fire alarm system will have battery backup.

F. Security System:

A microprocessor controlled, zoned central security system will be used to secure the building after normal operating hours. System components will consist of motion sensors, glass break sensors, door contacts, fire alarm interface, automatic dialing and access controlled doors.

G. Codes and Regulations:

All electrical work will be designed and installed in accordance with the NFPA National Electrical Code, D.C. Electrical Code Supplement, and all applicable Codes and regulations.

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Space Program

As a result of initial community review, the following modifications were incorporated into the final concept design:

- Provide a weight training room.
- Provide a movable partition as the separation between the meeting rooms in lieu of a fixed wall.
- Provide a walking track around the perimeter of the ball field.
- Provide site lighting to facilitate use of ball field at night.

The program functions of the spaces provided are outlined in the following space program.

Program Change:

- The program is revised to include an indoor **Gymnasium**.

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Lamond Recreation Center

Room Summary

SPACE	Gymnasium
FUNCTION	Basketball/Multipurpose
SIZE	77' x 97'
STAFF	None
VISITOR CAPACITY	250
RELATIONSHIPS	Lockers and Shower Centrally
FURNITURES & EQUIPMENT	Bleachers, Basketball Backboards
FINISHES	
Floors	Wood
Walls	Masonry
Ceilings	Exposed

Lamond Recreation Center

Room Summary

SPACE	Multipurpose Room Reception Activities
FUNCTION	Meetings/Community Activities
SIZE	30’ x 20'
STAFF	None
VISITOR CAPACITY	100
RELATIONSHIPS	Lobby, Storage Room, Main Entry
FURNITURES & EQUIPMENT	Tables, Chairs
FINISHES	
Floors	Vinyl Composition Tile
Walls	Masonry
Ceilings	Exposed Heavy Timber Framing

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Room Summary

SPACE	Control
FUNCTION	Visitor Assistance
SIZE	10' x 20'
STAFF	Two
VISITOR CAPACITY	None
RELATIONSHIPS	Main Entry, Multipurpose Room, Storage Area
FURNITURES & EQUIPMENT	Counters, Chairs
FINISHES	
Floors	Vinyl Tile
Walls	Masonry
Ceilings	Mylar Faced Acoustical Tile

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Room Summary

SPACE	Reception
FUNCTION	Administrative
SIZE	10' x 9'
STAFF	One
VISITOR CAPACITY	None
RELATIONSHIPS	Administrative Office, Control
FURNITURES & EQUIPMENT	
FINISHES	
Floors	Vinyl Composition Tile
Walls	Masonry
Ceilings	Suspended Acoustical Tile

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Room Summary

SPACE	Computer Room
FUNCTION	Training
SIZE	15' x 20'
STAFF	One
VISITOR CAPACITY	20
RELATIONSHIPS	Administrative Office, Arts & Crafts Romms
FURNITURES & EQUIPMENT	Desks, Chairs
FINISHES	
Floors	Carpet
Walls	Masonry
Ceilings	Suspended Acoustical Tile

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Room Summary

SPACE	Office
FUNCTION	Administrative Task
SIZE	10' x 10'
STAFF	One
VISITOR CAPACITY	Two
RELATIONSHIPS	Reception, Control
FURNITURES & EQUIPMENT	Desk, Chair
FINISHES	
Floors	Carpet
Walls	Drywall/Masonry
Ceilings	Suspended Acoustical Tile

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Room Summary

SPACE	Arts and Crafts
FUNCTION	Passive Activity
SIZE	15' x 20'
STAFF	One
VISITOR CAPACITY	15
RELATIONSHIPS	Multipurpose Room
FURNITURES & EQUIPMENT	Desks, Chairs
FINISHES	
Floors	Vinyl Composition Tile
Walls	Masonry
Ceilings	Suspended Acoustical Tile

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Room Summary

SPACE	Pantry/Kitchenette
FUNCTION	Food Warming
SIZE	15' x 15
STAFF	None
VISITOR CAPACITY	Three
RELATIONSHIPS	Multipurpose Room
FURNITURES & EQUIPMENT	Sink, Cabinets, Counters
FINISHES	
Floors	Vinyl Composition Tile
Walls	Masonry
Ceilings	Mylar Faced Suspended Tile

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Room Summary

SPACE	Storage Room
FUNCTION	General Storage
SIZE	10' x 16'
STAFF	None
VISITOR CAPACITY	None
RELATIONSHIPS	Multipurpose Room
FURNITURES & EQUIPMENT	
FINISHES	
Floors	Vinyl Composition Tile
Walls	Masonry
Ceilings	Suspended Acoustical Tile

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Room Summary

SPACE	Weight Training Room
FUNCTION	Physical Fitness, Weight Lifting
SIZE	15' x 15'
STAFF	One
VISITOR CAPACITY	10
RELATIONSHIPS	Locker Room/Multipurpose Room
FURNITURES & EQUIPMENT	Exercise Equipment
FINISHES	
Floors	Rubber Sports Surface
Walls	Masonry
Ceilings	Alcan metal

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Room Summary

SPACE	Men's Room
FUNCTION	Toilet
SIZE	12' x 20'
STAFF	None
VISITOR CAPACITY	None
RELATIONSHIPS	Rear Entrance, Multipurpose Room, Meeting Rooms
FURNITURES & EQUIPMENT	Plumbing Fixtures
FINISHES	
Floors	Ceramic Tile
Walls	Ceramic Tile
Ceilings	Plaster

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Room Summary

SPACE	Women's Room
FUNCTION	Toilet
SIZE	12' x 20'
STAFF	None
VISITOR CAPACITY	None
RELATIONSHIPS	Rear Entrance, Multipurpose Room
FURNITURES & EQUIPMENT	Plumbing Fixtures
FINISHES	
Floors	Ceramic Tile
Walls	Ceramic Tile
Ceilings	Plaster

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Room Summary

SPACE	Meeting Room
FUNCTION	Community Meetings
SIZE	12' x 25'
STAFF	One
VISITOR CAPACITY	15
RELATIONSHIPS	Mens & Womens Room, Administration Offices
FURNITURES & EQUIPMENT	Desks, Chairs
FINISHES	
Floors	Vinyl Composition Tile
Walls	Masonry
Ceilings	Suspended Acoustical Tile

McDonald · Williams ·Banks Architects
7705 Georgia Avenue, NW, #301, Washington, DC 20012
Tel: 202/291-5103 Fax: 202/291-5114
E-mail: at.banks@verizon.net